SIEMENS

SONOCUR

SP

Maintenance Instructions

System

SONOCUR

The protocol SPT3-130.105.01.04.02 is required for these instructions

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1 General information and requirements

1.1 Documents required

• Safety instructions	ARTD-002.731.17
• Service protocol	SPT3-130.105.01...
• Service instructions	SPT3-130.061.01...
• Spare parts list	SPT3-130.081.01...
• Operating instructions	SPT3-130.620.01...

1.2 Tools, measurement and auxiliary equipment required

NOTE

The indicated articles are listed in the STC (Service Tools Catalog) unless otherwise stated (the STC is a component of the Spare Parts Catalog).

• Service tools	
• Protective conductor meter or Bender safety meter	44 15.899 RV 090 97 06 979 Y0526
• Digital voltmeter, e.g., Fluke 187	99 94 831
• 4l distilled water	
• Viscogen KL 300	73 95 353 RH090

1.3 Text emphasis

⚠DANGER	**DANGER indicates when there is an immediate danger that l e a d s to death or serious physical injury.**
⚠WARNING	**WARNING indicates a risk of danger that m a y l e a d to death or serious physical injury.**
⚠ CAUTION	**CAUTION used with the safety alert symbol indicates a risk of danger that leads to slight or moderate physical injury and/ or damage to property.**
NOTICE	**NOTICE used without the safety alert symbol indicates a risk of danger that if disregarded leads or may lead to a potential situation which may result in an undesirable result or state other than death, physical injury or property damage.**

Fig. 1: Safety Notes

1.4 Safety information and protective measures

NOTE

- **When performing service work and tests adhere to:**
  - **the product-specific safety information in the document,**
  - **the general safety information contained in the ARTD part 2.**
- **Pull out the power plug when performing service on the SONOCUR.**
- **General safety requirements should be observed when performing service while voltage is present.**
- **Observe ESD regulations.**
- **SONOCUR should be switched off before assemblies or boards are replaced.**
- **After all work has been concluded and after all covers have been reattached, perform the protective conductor test according to ARTD-002.731.17.**
- **The protective conductor resistance may not exceed 0.2 Ohms.**
- **When performing work on the switch-on assembly (replacing the switch-on assembly or line voltage cable), the leakage current of the replacement part should be measured and documented.**

1.5 Abbreviations

Abbrev.	Description
SI	Safety Inspection
SIE	Electrical Safety Inspection
SIM	Mechanical Safety Inspection
PM	Preventive Maintenance
PMP	Preventive Maintenance, Preventive Parts Replacement, Visual Inspection
PMA	Preventive Maintenance Adjustments
PMF	Preventive Maintenance, Function Check, Operating Value Check
Q	Quality Check
QIQ	Image Quality Check
QSQ	System Quality Check
SW	Software Maintenance

The steps identified by these abbreviations are part of the maintenance certificate and should be checked off upon completion.

NOTE

- **The sequence for complete maintenance and inspection is described in the following pages.**
- **Each work step must be performed on an annual basis, if not otherwise specified.**

2 Inspection and maintenance

2.1 Visual inspection of exterior

PMP Covers

- Check covers on SONOCUR for damage.

PMP Surface damage (paint chips)

- Check entire system for surface damage.

2.2 Inspection of environment

SIE Power outlets

- Check power outlets for damage.

SIE Line voltage

- Check line voltage.

SIE Ground fault detector.

- Check ground fault detector.

2.3 System checks

SIM Covers

- Remove covers from system and suspension arm.
- Check covers for damage.

SIM Suspension arm

- Move suspension arm and note any play or noise.
- Check point of attachment for suspension arm.
- Lubricate swivel joint 1 of the support arm with Viscogen oil. Apply several drops of oil (approx. 10 ml) on the upper flange of the swivel joint (1/Fig. 1 / p. 11) while moving it with the brake released.

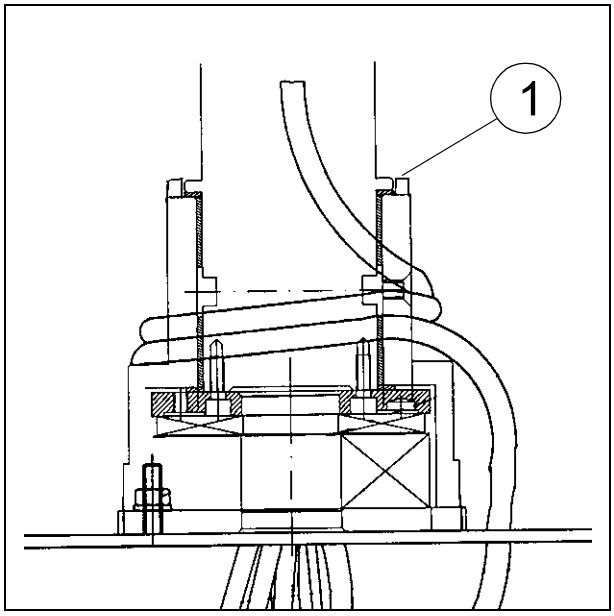

Fig. 1: Swivel joint

SIM Brakes

- On a level floor, check the function of the footbrake.
- Release the magnetic brakes and check ease of movement of suspension arm.
- Check magnetic brakes while activated.

SIM Wheels

- Confirm straight and smooth travel of system cart on level floor.

SIM Warning labels and markings

- Check the status of warning labels and markings.
  - ➪ Replace any illegible labels or markings.

SIE Cable and plugs

- Check visible cables and plugs on the SONOCUR for damage.

2.4 Preventive maintenance

PMP System

- Clean visible cables.
- Clean out surfaces of covers.
- Clean tires on wheels.
- Clean interior of system cart.

PMP Ventilation

- Remove contaminants from the vents of the charging/energy generator.
- Clean vents of cooling system.
- Clean system ventilation.

2.4.1 Water system

PMP Water filter

- Drain the cooling system (refer to service instructions SPT3-130.061.01).
- If the pump head (2/Fig. 2 / p. 12) is still installed, replace it with the cooling pump (3/Fig. 3 / p. 12).

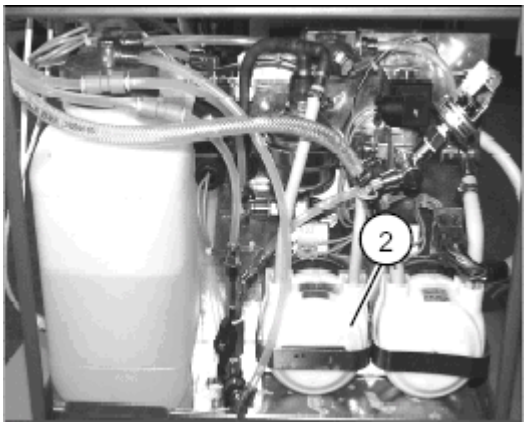

Fig. 2:

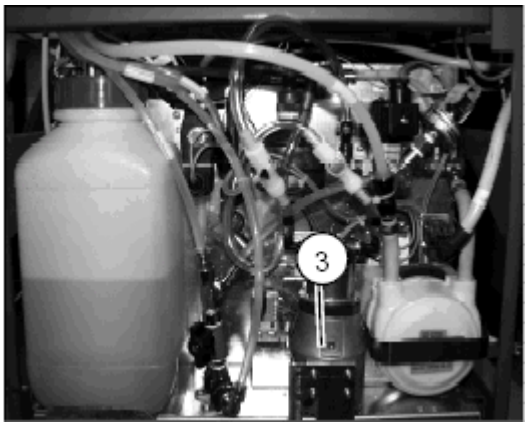

Fig. 3:

- Clean the water filter from the cooling system.

PMP Water circuitry system controlling coupling - pump head

- Drain couple cooling system (refer to service instructions SPT3-130.061.01).
- Replace pump head on an annual basis.

PMP Water circuitry system controlling coupling - complete pump assembly (every 3 years)

- The entire pump assembly must be replaced every three years.

PMP Refill water system

- Fill water system with fresh water (refer to service instructions SPT3-130.061.01)

2.5 Function check

SIM Shock wave focus (only with SONOCUR Plus)

- Attach shock wave focus phantom to shock wave head.
- Check shock wave focus according to operating instructions (settings, if necessary, refer to service instructions SPT3-130.061.01).

PMF Pressure pulse release

- Select energy level 9 and release 5 pulses.
- Select energy level 9 and release 5 pulses.

PMP Maintenance

- Touch up damaged paint.

2.6 Concluding work

- Reinstall covers from system and suspension arm.

SIE Protective conductor test

- Perform protective conductor test with all system covers and panels in place (ARTD-002.731.17).

  ➪ The protective conductor resistance may not exceed 0.2 Ohms.

3 Changes to previous version

Converted documentation to DMS

16 Changes to previous version